

REMARKS

This application has been amended in a manner that is believed to place it in condition for allowance at the time of the next Official Action.

Claims 18-31 are pending in the present application. Support for claims 18-31 may be found generally throughout the specification and in the original claims. Claims 1-17 have been cancelled.

In the outstanding Official Action, the Official Action objected to the declaration that was filed with the present application. However, applicants note that this is a divisional application from U.S. Patent Application No. 09/762,481, now U.S. Patent No. 6,632,639. Thus, the present application was filed with a copy of the declaration from the parent application. However, the Application Data Sheet of the present application spells the name of Marc Dreyfus correctly. As a result, applicants do not believe that a new declaration is required.

Claims 1-17 were rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-11 of U.S. Patent No. 6,632,639.

Applicants submit herewith a terminal disclaimer to obviate the rejection.

Claims 1-6, 8-15 and 17-19 were rejected under 35 USC §112, first paragraph, for allegedly not satisfying the enablement requirement.

However, applicants note that original claims 1-17 have been cancelled and that new claims 18-31 have been added. As claims 18-31 are directed to particular mutations, applicants believe that the above-identified rejection has been obviated.

Claims 1, 3-8 and 10-17 were rejected under 35 USC §103(a) as allegedly being unpatentable over KIDO et al. This rejection is respectfully traversed.

KIDO et al. only demonstrates that deletions in the C-terminal portion of RNase E do not affect the viability of *E. coli*.

Specifically, by researching revertants of mutations in an *E. coli* protein (MukB) necessary for the segregation of chromosomes after replication, KIDO et al. obtained various viable mutations in the *rne* gene, coding RNase E in *E. coli*, which cause synthesis of an RNase E that is truncated in its C-terminal portion. At best, it can be concluded from these experiments that the C-terminal portion of RNase E is not essential for viability of *E. coli* as the mutants are able to grow normally, as noticed by the Patent office.

The authors of this article have only formulated the hypothesis that the suppression of the *mukB* mutations by truncating the RNase E, reflects the fact that truncated RNase E is less effective than the wild-type enzyme for degrading *mukB* mRNA, i.e. an endogenous mRNA encoding an endogenous protein, but not for degrading any mRNA, and more particularly mRNA encoding

exogenous predetermined polypeptides, the DNA encoding these latter being inserted into the genome of *E. coli*.

Furthermore, this stabilization of the *mukB* messenger was not demonstrated, and KIDO et al. themselves recognize that other authors proposed a different explanation of this mechanism based on the possible interaction between these two *E. coli* proteins, i.e. Rne and MukB (see the end of the article). As a matter of fact, other authors proposed a different mechanism to explain the suppressive effect of the truncating of RNase E on *mukB* mutations (Cohen and McDowall, 1997). These authors postulate that a direct interaction between RNase E and MukB proteins occurs. The basis for that idea is the fact that RNase E has a very substantial similarity with eukaryotic myosin (Casaregola et al., 1992; McDowall et al., 1993), which suggests that aside from its own RNase activity, it could, like MukB, play a structural role.

This stands somewhat in contrast to the claimed invention which is concerned with the observation that mRNA of exogenous recombinant genes are particularly unstable because of the synchronization between transcription and translation, and that the mutation of the RNase gene according to the invention allows a preferential stabilization of recombinant mRNA when compared to cellular RNA. By doing so, the claimed invention allows the specific increase of the production rate of recombinant polypeptides. This particular effect of the RNase E

mutation according to the invention cannot be deduced from KIDO et al.

**COPY FOR DEPOSIT
ACCOUNT PURPOSES**

Thus, it cannot be deduced from this article that such RNase E coding gene mutation can be used in the frame of processes for the production of predetermined exogenous recombinant polypeptides wherein the rate of production of said recombinant polypeptides is higher when compared to the same processes carried out with an *E. coli* strain which does not carry such mutation.

Thus, in view of the above, applicants believe that KIDO does not disclose or suggest the claimed invention.

In view of the present amendment and foregoing remarks, therefore, applicants believe that the present application is in condition for allowance at the time of the next Official action. Allowance and passage to issue on that basis is respectfully requested.

Please charge the terminal disclaimer fee of \$130 to Deposit Account No. 25-0120.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

mutation according to the invention cannot be deduced from KIDO et al.

Thus, it cannot be deduced from this article that such RNase E coding gene mutation can be used in the frame of processes for the production of predetermined exogenous recombinant polypeptides wherein the rate of production of said recombinant polypeptides is higher when compared to the same processes carried out with an *E. coli* strain which does not carry such mutation.

Thus, in view of the above, applicants believe that KIDO does not disclose or suggest the claimed invention.

In view of the present amendment and foregoing remarks, therefore, applicants believe that the present application is in condition for allowance at the time of the next Official action. Allowance and passage to issue on that basis is respectfully requested.

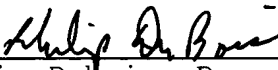
Please charge the terminal disclaimer fee of \$130 to Deposit Account No. 25-0120.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional
fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON


Philip Dubois, Reg. No. 50,696
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

PD/lk

Appendix:

The Appendix includes the following item:

- terminal disclaimer